

# **[REMOVING NO<sub>x</sub>, SO<sub>2</sub>, AND Hg FROM A GAS STREAM USING LIMESTONE REGENERATION]**

## **Abstract of Disclosure**

A process and apparatus for removing SO<sub>2</sub>, NO, and NO<sub>2</sub> from a gas stream having the steps of oxidizing a portion of the NO in the flue gas stream to NO<sub>2</sub>, scrubbing the SO<sub>2</sub>, NO, and NO<sub>2</sub> with an ammonia, ammonium hydroxide, alkali hydroxide or carbonate scrubbing solution, regenerating the scrubbing solution with limestone, and removing any particulate matter and aerosols generated by the scrubbing step in a wet electrostatic precipitator. The process can also remove Hg by oxidizing it to oxidized Hg and removing it in the wet electrostatic precipitator. The scrubbing solution is preferably regenerated with limestone or magnesium, and results in a Group II sulfite or sulfate that can be recovered and sold, or landfilled.

## Figures